



### REMARKS

Claims 77, 80, 84, 87-88, 105-106, 114-115, 128 and 133-134 are currently pending in this application.

In the Official Action of February 14, 2006, the specification has been objected to on the basis of certain alleged discrepancies in the wild-type sequences and the modified or mutant sequences. Further, the Examiner has stated that the mutations shown in Table 9 do not correspond to the amino acid numbers in SEQ ID NO:2. Applicants believe that there is no real discrepancy with respect to the sequences, the numbering scheme, or the mutations shown in Table 9 as explained in more detail below.

Applicants, in their prior response, pointed out that the numbering scheme used in the amino acid sequence is due to the fact that the precursor protein contains 25 additional amino acids as compared to the mature protein. In other words, the numbering scheme used would be expected to be 25 amino acids different based on the difference between the mature and precursor proteins.

Thus, for instance, the first mutant, K287C/K294C, wherein Lys is switched to Cys at both positions, indicates that this occurs at amino acids 287 and 294. If you add 25 to each of these amino acids, you have amino acids 312 and 319. Referring to SEQ ID NO:2, the amino acids located at positions 312 and 319 are indeed Lys.

Similarly, the next mutant shown in Table 9 is E284C/E301C, wherein Glu is switched to Cys at both positions in SEQ ID NO:2. If 25 is added to the numbering scheme in SEQ ID NO:2, the Glu amino acids should be located at positions 309 and 326, which they are. The same numbering sequence for the amino acid positions can also be made for the other listed mutants and amino acids in Table 9.

The other discrepancy noted on page 28 of the specification has now been corrected.

Accordingly, applicants submit that the objection to the specification as stated in the Office Action should be withdrawn.

Claims 77, 80, 84, 87-88, 105-106, 114-115, 128 and 133-134 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. This ground of rejection is traversed.

The Examiner states that claims 84, 87, 88, 133 and 134 are indefinite and ambiguous in the recitation of "E284C/E301C", "K287C/K294C" and "K289C/K294C" in the claims without providing the SEQ ID NO.

Applicants have now revised the claims to refer to SEQ ID NO:2. The mutant K289C/K294C in the claims has been replaced with L289C/K294C, antecedent support for which is found on page 8 of the specification. The correlation of the numbering system for the mature vs. the precursor protein has been explained above.

Claims 77, 80, 84, 87-88, 105-106, 114-115, 128 and 133-134 stand rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification so as to enable one skilled in the art to make and/or use the invention as claimed. This ground of rejection is traversed.

The Examiner states that the specification does not enable one skilled in the art to practice the invention without an undue amount of experimentation. In particular, the Examiner states that the claims should include a reference to SEQ ID NO:2, and that the numbering system used for the amino acid sequence should be clarified.

In response, applicant has now included SEQ ID NO:2 in all of the pending claims. The numbering system for the mature protein begins at amino acid 25 (Ser) in SEQ ID NO:2, as has been previously explained.

Claims 77, 80, 84, 87-88, 105-106, 114-115, 128 and 133-134 also stand rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that applicant had possession of the invention. This ground of rejection is also traversed.

The Examiner states that applicants have disclosed only SEQ ID NO:2, and that the claims should not be directed to any modified  $\alpha$ L integrin I-domain protein.

The claims now expressly include a reference to SEQ ID NO:2. Accordingly, this ground of rejection is now deemed to be moot.

In view of the aforementioned facts and reasons, the pending claims and specification of this application are now believed to overcome any remaining objections and rejections, and to satisfy all requirements for patentability. Accordingly, withdrawal and reconsideration of the rejections, and allowance of the claims in this application, are solicited. The Examiner is invited to contact the undersigned if this would serve to advance the prosecution of this application.

Dated: 9/15/06

Respectfully submitted,

By William G. Gosz

William G. Gosz

Registration No.: 27,787

Gosz and Partners, LLP

450 Bedford Street

Lexington, MA 02420

Attorneys/Agents For Applicant